

WHAT IS CLAIMED IS:

1. In an electronic device which has a housing and a cover
movable between a closed position and an open position with
respect to the housing, an unfolding apparatus for
automatically opening the cover with respect to the housing,
the unfolding apparatus comprising:
a first means for creating a first magnetic field, the first
means being adapted to be provided in the housing of the
electronic device;
a second means for creating a second magnetic field, the
second means being adapted to be provided in the cover of
the electronic device and be opposite to the first magnetic
field when the cover is in the closed position; and
a controller for controlling at least one of the first and second
means, the controller being adapted to be provided in at least
one of the housing and the cover;
whereby the first and second magnetic fields interact to move
the cover from the closed position to the open position.
2. The unfolding apparatus in accordance with claim 1, wherein
when the cover is in the closed position, the controller enables
one of the first and second means to create the corresponding
first or second magnetic field, such that the created first or
second magnetic field repels the second or first magnetic field
of the corresponding second or first means.
3. The unfolding apparatus in accordance with claim 1, wherein
the first means for creating the first magnetic field comprises
an electromagnetic coil.
4. The unfolding apparatus in accordance with claim 1, wherein
the second means for creating the second magnetic field
comprises a magnet.

5. The unfolding apparatus in accordance with claim 1, wherein the controller comprises a movable contact and a stationary contact, and the movable contact and stationary contact are normally in an open state.

5 6. A portable communication device comprising:

a housing having a keypad;

a cover attached to the housing by a hinge, the cover being movable between a closed position and an open position with respect to the housing;

10 a first means for creating a first magnetic field, the first means being adapted to be provided in the housing;

a second means for creating a second magnetic field, the second means being adapted to be provided in the cover and be opposite to the first magnetic field when the cover is in the closed position; and

15 a controller having a pair of first movable and first stationary contacts respectively and a pair of second movable and second stationary contacts respectively, the pair of first contacts being connected to a power source of the device and thereby controlling at least one of the first and second means, the pair of second contacts controlling answering of incoming messages of the device, the controller being provided in at least one of the housing and the cover.

20 7. The portable communication device in accordance with claim 6, wherein when the cover is in the closed position, the controller enables one of the first and second means to create the corresponding first or second magnetic field such that the created first or second magnetic field repels the second or first magnetic field of the corresponding second or first means.

25

30

8. The portable communication device in accordance with claim 6, wherein the first means for creating the first magnetic field comprises an electromagnetic coil.

5 9. The portable communication device in accordance with claim 6, wherein the second means for creating the second magnetic field comprises a magnet.

10. The portable communication device in accordance with claim 6, wherein the first and second pairs of contacts are each normally in an open state.

10 11. An electronic device comprising:

a housing having a keypad;

a cover attached to the housing by a hinge;

a first means for creating a first magnetic field, the first means being adapted to be provided in the housing;

15 a second means for creating a second magnetic field, the second means being adapted to be provided in the cover and be opposite to the first magnetic field when the cover is in a closed position; and

20 a controller for creating at least one of the first and second magnetic fields to thereby control magnetic force between the first and second magnetic fields, the controller being provided in at least one of the housing and the cover.

25 12. The electronic device in accordance with claim 11, wherein when the cover is in the closed position, the controller enables one of the first and second means to create the corresponding first or second magnetic field such that the created first or second magnetic field repels the second or first magnetic field of the corresponding second or first means.

30 13. The electronic device in accordance with claim 11, wherein

the first means for creating the first magnetic field comprises an electromagnetic coil, and the second means for creating the second magnetic field comprises a magnet.

14. The electronic device in accordance with claim 11, wherein
5 the controller comprises at least one movable contact and at least one stationary contact.

15. The electronic device in accordance with claim 14, wherein each pair of contacts comprising one movable contact and one stationary contact is normally in an open state.

10 16. A cellular phone comprising:
a housing and a cover rotatably attached to the housing;
a controller positioned in the housing and activated, directly or indirectly, by a button, said controller activating circuits to create inducement; and
15 a device mounted on the cover actuated by said inducement to rotatably move the cover relative to the housing.

17. The cellular phone in accordance with claim 16, where said device is a permanent magnet.

18. The cellular phone in accordance with claim 16, wherein
20 said inducement is performed by an electro magnet.